# Draft NIST Special Publication 800-140F

# CMVP Approved Non-Invasive Attack Mitigation Test Metrics:

*CMVP Validation Authority Updates to ISO/IEC 24759:2014(E)*

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INFORMATION SECURITY

National Institute of Standards and Technology
U.S. Department of Commerce

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U.S. Department of Commerce
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National Institute of Standards and Technology
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## Abstract

NIST Special Publication (SP) 800-140F replaces the approved non-invasive attack mitigation test metric requirements of ISO/IEC 19790 Annex F. As a validation authority, the Cryptographic Module Validation Program (CMVP) may supersede this Annex in its entirety. This document supersedes ISO/IEC 19790 Annex F and ISO/IEC 24759 paragraph 6.18.

## Keywords

attack mitigation; Cryptographic Module Validation Program; CMVP; FIPS 140 testing; FIPS 140; ISO/IEC 19790; ISO/IEC 24759; non-invasive; testing requirement; vendor evidence; vendor documentation.

## Audience

This document is focused toward the vendors, testing labs, and CMVP for the purpose of addressing issues in cryptographic module testing.

## Table of Contents

# 1 Scope

This document specifies the Cryptographic Module Validation Program (CMVP) modifications of the methods to be used by a Cryptographic and Security Testing Laboratory (CSTL) to demonstrate conformance. This document also specifies the modification of methods for evidence that a vendor or testing laboratory provides to demonstrate conformity. Unless otherwise specified in this document, the test requirements are specified in ISO/IEC 24759 paragraph 6.18.

# 2 Normative references

This section identifies additional references to the normative references cited in ISO/IEC 24759. For dated references (e.g., ISO/IEC 19790:2012/Cor.1:*2015*(E)), only the edition cited applies. For undated references (e.g., ISO/IEC 19790), the latest edition of the referenced document (including any amendments) applies.

National Institute of Standards and Technology (2019) *Security Requirements for Cryptographic Modules*. (U.S. Department of Commerce, Washington, DC), Federal Information Processing Standards Publication (FIPS) 140-3. https://doi.org/10.6028/NIST.FIPS.140-3

# 3 Terms and definitions

The following terms and definitions supersede or are in addition to ISO/IEC 19790 and ISO/IEC 24759.

*No additional terms at this time*.

# 4 Symbols and abbreviated terms

The following symbols and abbreviated terms supersede or are in addition to ISO/IEC 19790 and ISO/IEC 24759 throughout this document:

| | |
|---|---|
| CCCS | Canadian Centre for Cyber Security |
| CMVP | Cryptographic Module Validation Program |
| CSD | Computer Security Division |
| CSTL | Cryptographic and Security Testing Laboratory |
| FIPS | Federal Information Processing Standard |
| FISMA | Federal Information Security Management/Modernization Act |

| | | |
|---|---|---|
| NIST | National Institute of Standards and Technology |
| SP 800-XXX | NIST Special Publication 800 series document |
| TE | Test Evidence |
| VE | Vendor Evidence |

# 5 Document organization

## 5.1 General

Section 6 of this document replaces the approved non-invasive attack mitigation test metrics requirements of ISO/IEC 19790 Annex F and ISO/IEC 24759 paragraph 6.18.

## 5.2 Modifications

Modifications will follow a similar format as in ISO/IEC 24759. For additions to test requirements, new Test Evidence (TEs) or Vendor Evidence (VEs) will be listed by increasing the "sequence_number." Modifications can include a combination of additions using underline and deletions using ~~strikethrough~~. If no changes are required, the paragraph will indicate "No change."

# 6 CMVP-approved non-invasive attack mitigation test metric requirements

## 6.1 Purpose

This document identifies CMVP-approved non-invasive attack mitigation test metrics.

## 6.2 Approved non-invasive attack mitigation test metrics

ISO/IEC 17825 Information technology – Security techniques – Testing methods for the mitigation of non-invasive attack classes against cryptographic modules

ISO/IEC 20085-1 Information technology – Security techniques – Test tool requirements and test tool calibration methods for use in testing non-invasive attack mitigation techniques in cryptographic modules — Part 1: Test tools and techniques *(pending publication)*

ISO/IEC 20085-2 Information technology – Security techniques – Test tool requirements and test tool calibration methods for use in testing non-invasive attack mitigation techniques in cryptographic modules — Part 2: Test calibration methods and apparatus. *(pending publication)*

178 **Document Revisions**

| Date | Change |
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